User Manual

FRM301 SNMP
Upgrade Procedure

CTC Union Technologies Co.,Ltd.

ISO 9001

FRM301 SNMP Upgrade Procedure
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CTC Union Technologies Co.,Ltd.
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1.0 Introduction

The purpose of this document is to outline the procedures and pitfalls in upgrading the SNMP of the FRM301.

1.1 Preconditions

The FRM301 must be using hardware version 2.0 SNMP card. The Control Card in the rack must be using version 2.16 CPU firmware version (as of this writing). If an SNMP option is being installed for the first time, you will also be installing a Control Card. Now would be the best time to be sure the Control Card has the latest firmware. The Control Card's CPU firmware upgrade is support by chip replacement only.

The original version 2.0 hardware SNMP was released with SNMP code version 3.42 for the FRM301. The SNMP is upgraded by using TFTP (Trivial File Transfer Protocol). The SNMP agent provides the ability to upload the new code, re-flash the flash memory and reboot with the new SNMP operational code.

1.2 Items required

a. The FRM301 unit with SNMP option installed and network connection. Version 3.4X to be upgraded to version 3.47. (as of July 2005)
b. A Windows® based PC with a network connection and with at least one free Com port, telnet and terminal emulation software (such as HyperTerminal).
c. Serial console cable (DB9M to DB9F)
d. Ethernet UTP cables
e. SNMP ver. 3.47 binary image file
f. CTC Union TFTP server for Windows® (or other TFTP server)

2.0 Equipment Setup

The upgrade procedure could possibly have effect on the traffic passing through an online FRM301 unit. It is recommended that the unit be taken offline for maintenance. Obviously, changing of Control Card firmware requires removing the card with power off. The procedure for removing the Control Card is all outlined in the User's Manual and will not be repeated here. If you are going to upgrade a unit's SNMP while the rack is online and transmitting traffic, choose a time of day when the few seconds of traffic interruption will have minimal effect (such as the middle of the night).

Two connections are required between the PC that will do the upgrade and the FRM301 that will be upgraded. First, a console connection, with terminal emulation program such as HyperTerminal with settings of 38.4K baud, 8 bits, no parity, 1 stop bit, and no flow control. The second connection is an Ethernet connection, either through a network or with a direct connection and crossover UTP cable.

Check the Ethernet settings of the FRM301 through the console mode. Either change the settings to match the network settings of your PC or set the PC's settings to match the FRM301's network settings. In the following example, we are on a 172.24.0.0 network with a subnet mask of 255.255.0.0 and a default gateway of 172.24.190.254. Our PC is set with an IP address of 172.24.1.126 and our FRM301 has an IP address of 172.24.1.4.

3.0 Setup the FRM301

The following screens will show the detailed procedures to setup the networking for the FRM401 and prepare for TFTP upgrade of the SNMP.

Once the console port is connected to a terminal, the following screen will display.

```
 ************************************************************
************************************************************
 *** CTC UNION TECHNOLOGIES CO., LTD            V3.45 -16   ***
 *** FRM-301 Fiber Optical Media Converter Rack Management  ***
 ************************************************************
 Main Menu and Rack Status:
   1:Slot #1 >> Empty       << || 9:Slot #9  >> E1 BNC      <<
   2:Slot #2 >> Empty       << || A:Slot #10 >> 10/100 Base <<
   3:Slot #3 >> Empty       << || B:Slot #11 >> 10/100 Base <<
   4:Slot #4 >> Empty       << || C:Slot #12 >> 10/100 Base <<
   5:Slot #5 >> Empty       << || D:Slot #13 >> 10/100 Base <<
   6:Slot #6 >> Empty       << || E:Slot #14 >> 10/100 Base <<
   7:Slot #7 >> Empty       << || F:Slot #15 >> 10/100 Base <<
   8:Slot #8 >> Empty       << || G:Slot #16 >> 10/100 Base <<
 Command Function Key:
 '1' to '9', 'A' to 'G': I/O Cards Setting
 'P': Show Fans and Powers Status
 'R': Refresh Status
 'ESC' Logout
 'M': Manager Configuration Setup
 'S': System Configuration and TFTP Setup
Console:[On  line] Telnet:[Off line]    GUI:[Off line]
```

If you are presented with login prompt, please enter the unit's password. If you forgot it, the super user password for terminal mode is '1021' (no quotes).

The actions we must first take are to configure the TCP/IP settings of the FRM301, if they are not already set. Next, we will setup the information required to access the TFTP server. Lastly, once the TFTP server is running on our network, we will execute the TFTP upgrade.

Select item 'S', "System Configuration and TFTP Setup"

```
************************************************************
*** CTC UNION TECHNOLOGIES CO., LTD            V3.45       ***
*** FRM-301 Fiber Optical Media Converter Rack Management  ***
************************************************************
System Configuration and TFTP Setup Menu:
    MAC Address                 : 0002AB091234
  1:IP Address                  : 172.24.1.4
  2:Subnet Mask                 : 255.255.0.0
  3:Gateway IP                  : 172.24.190.254
  4:TFTP Server IP              : 172.24.1.126
  5:TFTP Server Path            :
    c:\frm3v345.bin

Command Function Key:
'1' to '5': Configure Setting
'R': Reset All Setting to Default
'S': Store Setting and Reboot
'T': TFTP and Flash
'ESC': Main Menu
```

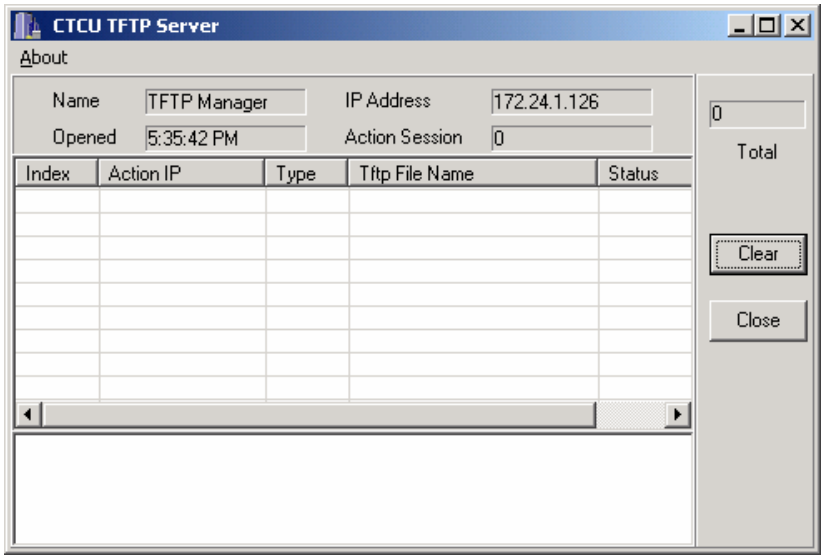
If the TCP/IP settings are not already correct, use menu items 1-3 to set the FRM401 for your network. For menu items 4 and 5, set the IP address for the TFTP server or the PC running the TFTP Server daemon. Enter the path and filename where the image file is placed on the TFTP server.
For example, to set the TFTP server's IP address, press '4'.

```
TFTP Server IP->172.24.1.126
TFTP Server Path->c:\frm3v347l.bin
```

Enter the IP address of the PC running the TFTP service, in our case '172.24.1.126' and the path to the upgrade file.

If you have made any changes to items 1-5, you must store and reboot the SNMP. Press 'S' to store the results and reboot the SNMP agent. If this is an online upgrade, each line card will experience a brief (2 seconds) loss in transmission while the card is polled by the SNMP at boot time.

Start the TFTP server on the connected PC. In our example, we are using the CTC Union TFTP server.



When the agent comes back up on our terminal, enter the password, if required, and again go to the "System Configuration and TFTP Setup" menu.

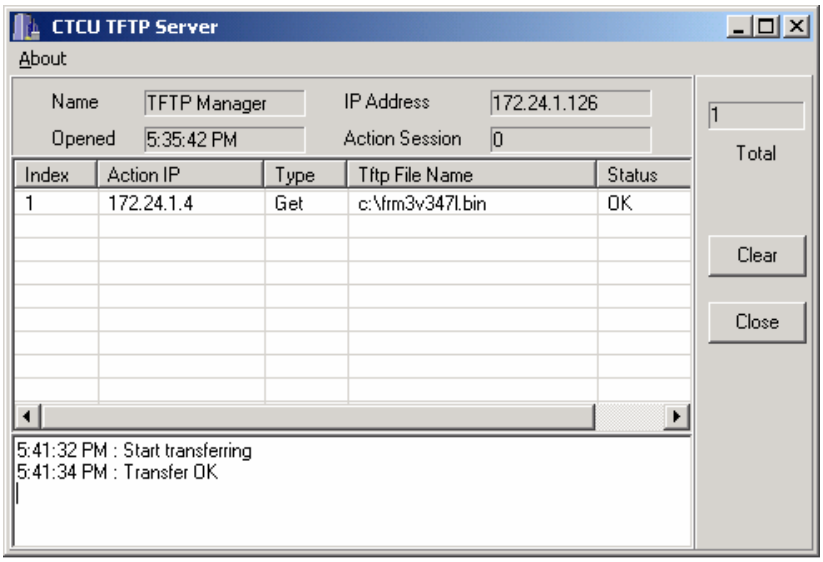
```
************************************************************
*** CTC UNION TECHNOLOGIES CO., LTD            V3.45       ***
*** FRM-301 Fiber Optical Media Converter Rack Management  ***
************************************************************
System Configuration and TFTP Setup Menu:
    MAC Address                 : 0002AB091234
  1:IP Address                  : 172.24.1.4
  2:Subnet Mask                 : 255.255.0.0
  3:Gateway IP                  : 172.24.190.254
  4:TFTP Server IP              : 172.24.1.126
  5:TFTP Server Path            :
    c:\frm3v347l.bin

Command Function Key:
'1' to '5': Configure Setting
'R': Reset All Setting to Default
'S': Store Setting and Reboot
'T': TFTP and Flash
'ESC': Main Menu
```

Press 'T' to start the TFTP upgrade. Press 'Y' to confirm.

```
Sure to TFTP and Reset ?(Y/N)
TFTP NOW, LOADING....
Loading ok!
Please don't power off! Flashing now...
ooooooooooooooooooooooooooooooo
Flash completed!
System reset! Please wait...
 Attached TCP/IP interface to secEnd unit 0
Attaching interface lo0...done
```

To confirm that a TFTP transfer actually took place, you may view the TFTP application on the PC before closing it.

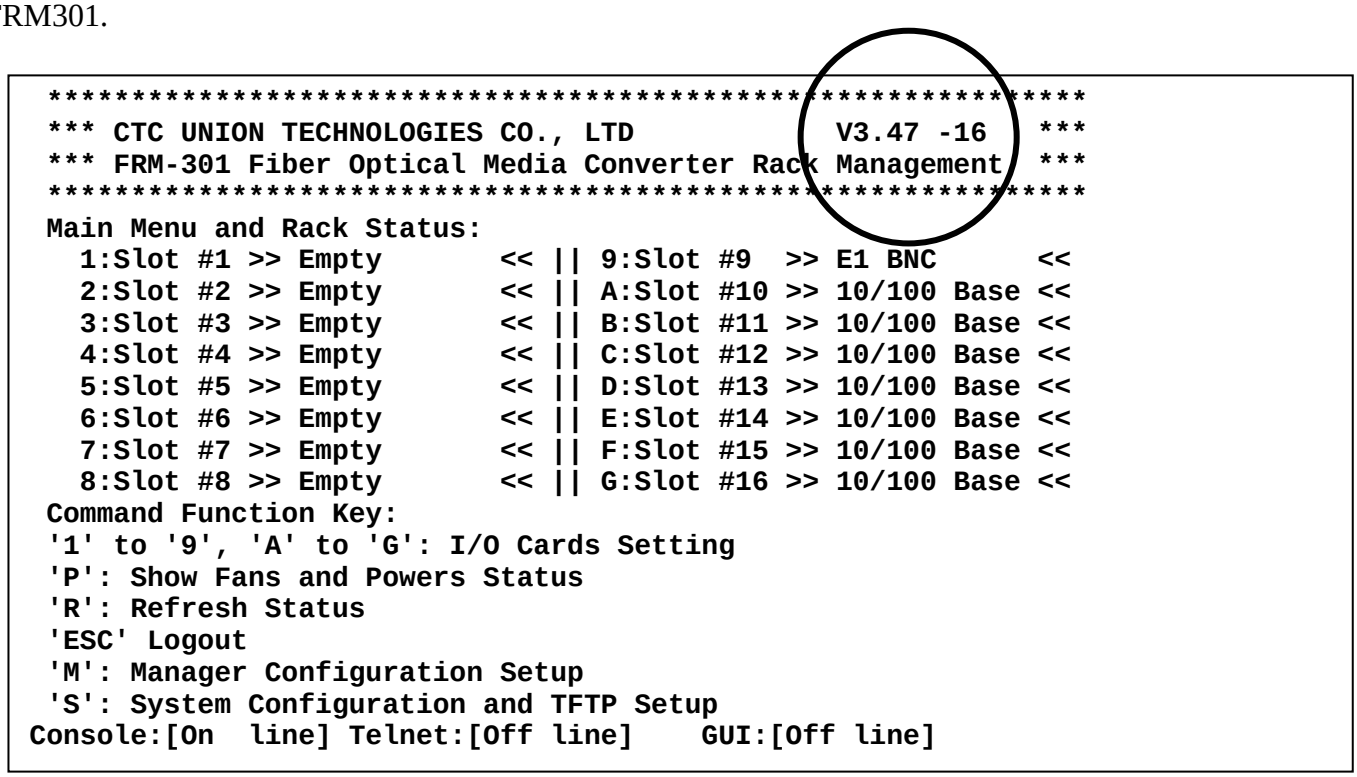


Note that one transfer did occur.

Watch the 'SNMP' LED on the SNMP card of the FRM301. When the LED returns to a constant 1 blink per second, the SNMP agent has rebooted. If this is an online upgrade, each line card will experience a brief (2 seconds) loss in transmission while the card is polled by the SNMP at boot time.

You may now 'Close' the TFTP server.

OK, now let's verify the version number of the SNMP. To do that, just login to the terminal of the FRM301.



Note that the version is now 3.47. The '-16' denotes that the Control Card's CPU firmware version is 2.16.

This completes the SNMP upgrade procedure.

Fiber Series Units

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